

SUB A27

- 3 A27
1. A method of retrieving an image from at least one of an information-storage medium and an information network, said method comprising:
- 5 image;
- a) entering a multi-leveled retrieval request for tags tagged to an image;
- b) evaluating an user's necessity for the image based on at least the retrieval request and a number of the request; and
- c) searching the image and displaying the image in order of precedence.
- 10
2. The method of retrieving an image as defined in claim 1, wherein the tags are classified by each class and the each class comprises a plurality of keywords.
- 15 B 3. The method of retrieving an image as defined in claim 1 ~~or claim 2~~, wherein the image is displayed in order of precedence.
4. An apparatus for retrieving an image from at least one of an information-storage medium and an information network, said apparatus
- 20 comprising:
- a) a menu entry section that allows an user to enter a multi-leveled retrieval request for tags tagged to an image;
- b) a retrieval section evaluating an user's necessity for the image based on at least the retrieval request and a number of the request; and
- 25 c) a display section displaying the image outputted from the retrieval section according to the user's necessity.

5. The apparatus for retrieving an image as defined in claim 4, wherein the tags are classified by each class and the each class comprises a plurality of keywords.

5 B 6. The apparatus for retrieving an image as defined in claim 4 ~~or claim 5~~, wherein the image is displayed in order of precedence.

7. The method of retrieving an image as defined in claim 2, wherein the user's necessity is evaluated according to a degree of necessity by the each class
10 for the image.

8. The apparatus for retrieving an image as defined in claim 5, wherein the user's necessity is evaluated according to a degree of necessity by the each class for the image.
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9. The method for retrieving an image as defined in claim 7, wherein the degree of necessity by the each class is obtained depending on i) a first value having larger value as a number of the tags tagged to the image increase, ii) a second value having larger value as a number of the tags tagged to
20 the image decrease, and

contributions of the first value and the second value to the degree of necessity by the each class are determined by a number of non-zero components of a retrieval request signal by the each class.

25 10. The apparatus for retrieving an image as defined in claim 8, wherein the degree of necessity by the each class is obtained depending on i) a first value having larger value as a number of the tags tagged to the image

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increase, ii) a second value having larger value as a number of the tags tagged to the image decrease, and

contributions of the first value and the second value to the degree of necessity by the each class are determined by a number of non-zero components
5 of a retrieval request signal by the each class.

11. The method for retrieving an image as defined in claim 9, wherein
when the number of the non-zero value is larger than a first
predetermined value, the first value mainly contributes to the degree of
10 necessity by the each class;

when the number of the non-zero value is smaller than the first
predetermined value, the second value mainly contributes to the degree of
necessity by the each class; and

which of the first value and the second value mainly contributes to the
15 degree of necessity by the each class changes with rapidity determined by a
second predetermined value in a neighborhood of a point that the number of no-
zero components equals the first value.

12. The apparatus for retrieving an image as defined in claim 10,
20 wherein

when the number of the non-zero value is larger than a first
predetermined value, the first value mainly contributes to the degree of
necessity by the each class;

when the number of the non-zero value is smaller than the first
25 predetermined value, the second value mainly contributes to the degree of
necessity by the each class; and

which of the first value and the second value mainly contributes to the

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degree of necessity by the each class changes with rapidity determined by a second predetermined value in a neighborhood of a point that the number of non-zero components equals the first value.

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